

R E P O R T

ON THE

PRESENT STATE OF OUR KNOWLEDGE

OF

LINGUISTIC ETHNOLOGY,

MADE TO THE

AMERICAN ASSOCIATION FOR THE ADVANCEMENT
OF SCIENCE,

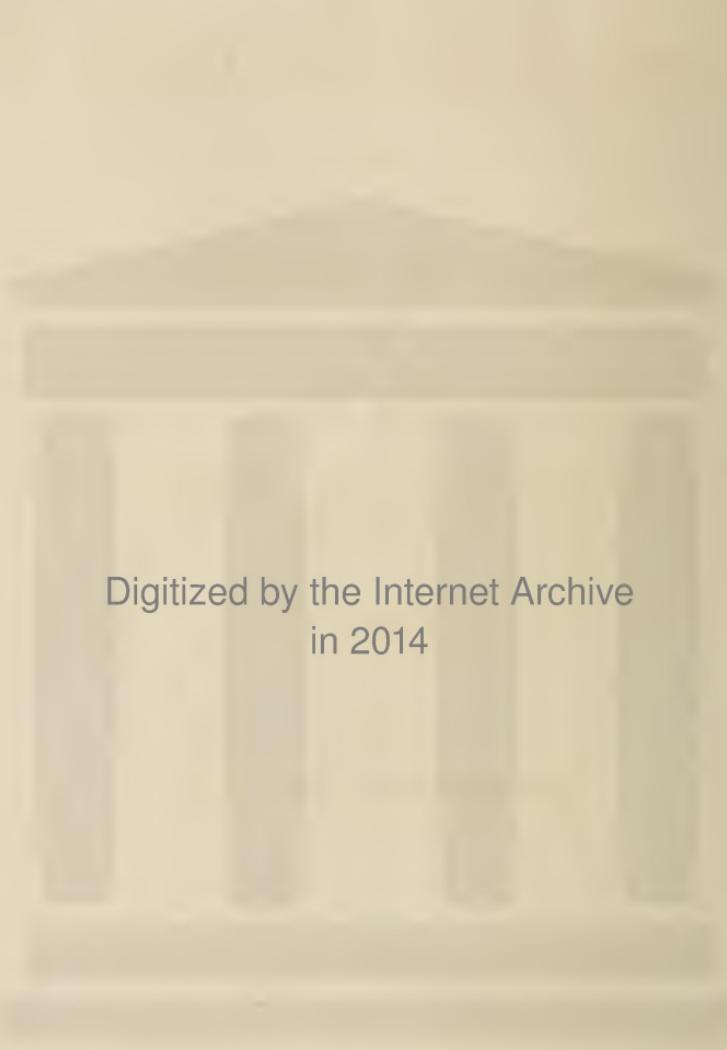
AUGUST, 1856.

BY

PROFESSOR S. S. HALDEMAN.

PUBLISHED FOR THE ASSOCIATION,
BY JOSEPH LOVERING,
PERMANENT SECRETARY.

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[After the following Report was presented to the Association, the author was commissioned to continue the subject in a further report, to be presented at Montreal in August, 1857, upon a system of alphabetic notation adapted to American and exotic languages. He would therefore respectfully ask the advice and co-operation of observers and scholars who take an interest in this intricate subject. Communications may be addressed to him directly, at Columbia, Pennsylvania, or to the care of John Penington and Son, Booksellers, Philadelphia ; or to the Smithsonian Institution, Washington City.]

C A M B R I D G E :

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R E P O R T.

THIS Report will be restricted to the portion of the subject pertaining to speech,—a portion which, although less extensive than the grammatical, lexicographical, or etymological portions of language, has not attracted proper attention until a recent period. This neglect is due to the difficulty of the subject, of which a constant example is at hand in the difficulty experienced in pronouncing foreign languages properly, even when they belong to the same stock, as Persian, German, Belgian, and English. The difficulty of pronouncing, appreciating, locating, explaining, and writing down the various phases of speech is so great, and there are so many sources of error, that we must be more cautious in accepting statements here, than in other sciences of observation, few having as much education in this branch as would be required to make a chemist or a musician; or to enable a singer to write down a song properly, even in a notation of his own invention. We cannot even trust an observer who claims for himself a good ear. The English lexicographer, Knowles, makes such a claim, and by his analysis proves that he does not possess the power to discriminate sounds; as in the case of *ye* and *woo*, which he considers equivalent to the repetitions *e-e* and *oo-oo*. The re-

porter is willing that the objections which he makes to the results of others should be urged against his own ; and that his assertions should be received with as much caution as those of any observer, having at various times held views which further research proved to be untenable.

Spanish grammarians emphatically deny that their *b* ever partakes of the power of English and Spanish *v*. They claim both *b* and *v*, and assert that *v* (like *f*) is made by the application of the lower lip to the upper teeth, and that their *b* is never made thus, the lips alone being concerned in its production, so that it is impossible that it can be anything else than a genuine *b*. The facts are as here given, but the inference is false. The Spanish *b* between vowels, the German *w*, and, according to E. A. Sophocles, the Ellenic* β , differ from English *v* in being formed with the lips alone. It is therefore an aspirate of *b* ('*B*) as the Greek ϕ is an aspirate of *p*, which *f* is not. This is an important point in ethnology, which few attend to. Doctor Lepsius does not allude to it, nor to the very distinct Russian vowel *bl*, in his recently published Standard Alphabet. Authors continually confound English labio-dental *v* with German labial *w*, and in giving an account of the languages they investigate, they cannot be trusted upon this point; so that we have yet to learn which of the two sounds is present in certain languages, the phonology of which is apparently treated with great fulness. Judging from a partial investigation, the Russian 'B' has the power of English and French labio-dental *v*.

Some writers (as Le Brethon and Marsden), in comparing the French and English vowels, refer \hat{a} to that in *fall*, and \acute{e} to

* *Modern Greek* is an awkward expression, and *Romaic* is incorrect, and as the language has lost *h*, *Hellenic* has become *Ellenic*. The word *Anglo-Saxon* is equally awkward, and degenerates into "Saxon," — a name which should be restricted to *Platdeutsch* in its modern and ancient or old Saxon form. The change of languages involves a change of pronunciation, as in the German *klar*, which closes to *clair* in French, and still farther to *clear* in English; so the language of Anglia and the Angles was *Anglisch*, and passed through *English*, with *e* in *met*, to the modern *English*, with the vowel in *fit*.

that in *end*; whilst others (Picot, Bolmar, &c.) refer à to the English vowel in *arm*, and é to that in *fate*. Duponceau, in 1817 (Am. Phil. Trans. I. 229), refers the English vowel in *fat* to the French vowel in *terre*, *père*, an error which Germans commonly make. In the alphabet of Lepsius, *fat* would be written fēt, and the French *mère* mēr. Duponceau seems to have been the first to show that the initial vowel of the English diphthongs in *aisle* or *isle*, and *owl*, is not that in *arm*, but the French à, which is made with a narrower aperture than a in *arm* requires, and with a slight tendency towards awe. The same author gives as the components of English u in *usage*, the vowels of *eel* and *ooze*, — an error which is retained by most English authors, very few of whom know what a diphthong is.

Every vowel added to a word forms an additional syllable, and as English u is a monosyllable, one of its elements is a consonant; namely, the initial when it is pronounced *you*, and the final when, as is sometimes the case, it is a diphthong pronounced like the Welsh *iv* and Belgian *iew*, with the vowel of it (German *hitzig*) and w as a consonant in *now*, or German u in *haus*. Similarly, the final element of *clo-y* is a consonant, and of *claw-y* a vowel.* German and French writers seem not to be aware of the nature of diphthongs, and in Latin-English grammars they are described as vowels.† In most ethnic alphabets, including that of Lepsius, the last element of the diphthongs is represented by a vowel character, — a fundamental error founded upon the crude analysis of the ancients.‡ The term *diphthong* is itself almost useless, because,

* Hald. Latin Pronunciation, §§ 109, 111. Latham's English Language, 1841, p. 108, § 68.

† Andrews and Stoddard consider the vowels of *fall* and *feel* diphthongs, because they pronounce the Latin LAVS and AETAS with them. They say that "two vowels in immediate succession in the same syllable" (including UO, UA !) "are called a diphthong. Yet if AETAS is read with but four elements instead of five (the a in *arm* being omitted), the word does not contain "two vowels in immediate succession."

‡ Dr. Lepsius assigns (Standard Alphabet, p. 41) to the Latin *diphthong oe* (*oi* in *going*, when pronounced as a monosyllable) the power of the German vowel ö, and'

as the first element is already a vowel, the peculiarity lies in the second coalescing with the first, (an impossibility with a second and subsequent vowel,) whence it may be called a *coalescent*, meaning by this term those consonants that approximate as nearly as possible to the vowels.

In a French work on Russian, the twenty-ninth Russian letter, b, is explained by comparing it with the French "e mute," whilst the twenty-seventh letter is said to have no sound, but to indicate that the preceding consonant is to be pronounced with force, and as if it were doubled. This gives a very incorrect view of these letters. For example, the Russian word for *five* is a monosyllable ~~with the short a in art~~, which might be represented pjatj in Latin or German letters, and pyaty in English letters, the final y being the Russian (b), and the modified y-sound following l in the French "ll mouillée." This addition to consonants is so common in Russian, that its absence is marked by the *yerr*, as in the word o-ke-án *ocean*, which is written with the final *yerr*. The allusion to doubled letters might cause Russian to be associated with Arabic, Latin, and Italian, which are among the few languages which have doubled or geminate elements, as in the Italian "Giovanni," *John*, in which each n is as distinctly sounded as in the English words *one name*.

Arabic has such doubled consonant sounds; yet it would be wrong to consider the sixteenth Arabic letter *tta* such a gemination on the authority of Richardson, who describes it (Grammar, p. 9) as "double t, or t with a slight aspiration," a description which is void of meaning, the reader being unable to tell whether the conjunction is copulative or disjunctive, and consequently whether the latter member of the sentence is explanatory of the former. Brown (Journey to Dar Fûr) assigns to the Dar Runga, words like *tta* water, *mmi* wo-

ignoring the Latin nasal vowels, writes *kglum* for COELUM. The dots are placed below ö to afford room above for accent marks, yet nasal vowels are indicated by (^) above, which may call for vowel characters surmounted with the three signs (^ ^'). Thus the French word *sans* (sä,) is long, and *cent* (sä,) is short.

man, *ddéta* mountain, *wwi* wind, *ggó* reprimanding; but as he gives no explanation of his notation, these are doubtful examples of geminate consonants.

Many English people fancy that they have double consonants, because they spell certain words (e. g. all, well, off, lesson, back, annex, allude) with double characters. This practice is in use to indicate a short preceding vowel, and when an Englishman writes a Latin Grammar, he is apt to believe and assert that syllables which are long "by position" are really short, but are "counted" or "considered" long, by a "mechanical rule"; whereas, the doubled consonants heard in Italian show that such syllables are really long, because it requires more time to pronounce two elements than one.* Similarly, Latin diphthongs are long, not by an arbitrary rule, but because the two elements of AV, AE, OE, &c. require more time than A and O alone.

The nasal vowels of but few foreign languages are properly understood, and the ignorance of writers whose vernacular does not contain them is frequently apparent. The error here is sometimes so great, as to cause a confusion between vowel and consonant, as in mistaking the nasal vowel of the French *fin* for the English and German *ng* in *fang*. The French word *fin* contains but two elements, a consonant followed by a genuine vowel, whilst the English *fang* has three elements, and ends with a consonant. The mistaking one for the other would be exactly paralleled in the practice of a foreigner who for *pea* would give *peag* as an English word.

This error in regard to the nasals appears in Riggs's valuable Grammar and Dictionary of the Dacota Language, based upon the studies of a number of observers during a period of eighteen years, and submitted to the inspection of a learned committee previous to its publication by the Smithsonian Institution. To a given character the power of 'n' in the French

* Most English grammarians do not distinguish between the length and the quality of their own vowels, regarding *a* and *o* in *fāte* and *ōbēy* as long, and those of *fāt* and *ōbjēct* as short, although, in these examples, the quantity does not differ.

bon and English *drink* is assigned, so that the reader is unable to pronounce with certainty the numerous words represented by this character,—an ‘n’ the second line of which is produced and ends like ‘j.’ But it is probable that neither the French nor the English sound occurs uniformly, for in the allied Conzo (each *o* as in *not*, *z* in *zeal*) the reporter has heard both, as (to use German characters) in hüng-ga *leggins*, with ü long and accented, and a short as in *art*. The French sound occurs in the Conzo word for *five*, which is the English syllable *saw* accented and followed by *t* and the French *un*, as if sàwtüⁿ. Using ‘n’ for Mr. Riggs’s letter, the Dacota word for *leggins* is hunská, and for *five*, zaptan.

Independently of the errors of observation, some writers have a practice of referring the sounds they meet with to those of other languages which they may know from description alone; and some proposers of general alphabets supply such foreign sounds with characters, although they run the risk of giving different characters to the same sound, or of confounding distinct sounds. An English alphabet-maker, upon reading that the Lenape (lenāpe) aborigines use a whistle in speech, might propose a character for it, although this sound is nothing but English *wh* before a consonant, as in whtē *heart* (*e* in *they*), its occurrence in a new connection conveying an impression analogous to that which a new sound would give. In comparisons of sounds, the reader should be informed whether the author has heard those he uses for comparison, and whether his opportunities have been few or many. Some sounds can be accurately described to those unfamiliar with them, as the German *w*, Greek *phi*, English *th* in *thin*, *then*, Welsh aspirate *ll*, *rh*, which latter, together with the Oriental *ghain* and its surd cognate (as they occur in Armenian) the reporter was accustomed to pronounce before he heard them from natives.

The alphabets used by various authors will give a good idea of the state of our knowledge in this department, except that they will not always enable us to establish a parallel between

them. After Rapp's *Physiologie der Sprache*, the Essentials of Phonetics of Mr. A. J. Ellis, A. B., London, 1848, may be placed, as a conscientious and valuable contribution to the general subject. Being printed in the author's alphabet, its use is restricted to those who can speak English. The alphabetic portion of this treatise is so corrupt, that it ought not to be used for any language; but it has an important concession to correct scholarship, in the use of Cay (and not Kah) as the cognate of Gay.

Castrén's *Grammatik der Samojedischen Sprachen* (St. Petersburg, 1854) contains a careful analysis of the sounds used. The iotaized (mouillées) consonants, or those followed, and in some cases modified, by the guttural coalescent approaching English *y* in *million*, are seven in number, *l, r, n, t, d, s*, and English *z*, marked with a curved line through the stem (on the right of *n, d*) of the characters,—an awkward notation requiring too many distinct characters. Ellis uses (j) deprived of its upper and lower dot (as in lj,) which is unexceptionable. The peculiarity of these compounds is, that whilst they commence with *l*, &c., the tongue passes to the iotaicism before the *l* is completed, *million* being mil^lyon when thus iotaized, which, however, is not essential to its purity as an English word. A soft lisped *d* is assigned to Lappish, which is allied to a lisped *r*. The latter quality seems to remove it from English sonant *th* in *then*. This curious sound should be compared with the peculiar Irish *l*, which the reporter first noted as an *l*-sound mixed with sonant *th*, but subsequently determined to be the sonant analogue of the Welsh surd aspirate *ll*, to which it would bear the same relation that *thy* bears to *thigh*. A sound between *f* and *h* is mentioned,—probably Greek *phi*; and a consonant between *l* and *r*. Castrén assigns a peculiar *ɥ* to Ostiak, and the Russian vowel *bl* to Samoiede. The latter (which has been heard by the reporter) may be described as a long and short vowel akin to English and German *i* in *still*,* but formed with a more open aperture, and the an-

* This is not the short quantity of the vowel in *field*, and cannot be correctly represented by (i) of the Latin and Italian alphabets.

gles of the lips drawn back. It has the pinched quality of German ö and ü, but without the pursed lips used in forming these well-known vowels.

Böhtingk (Ueber die Sprache der Jakuten, St. Petersburg, 1851) mentions a nasal of the German J. The reporter* mentions such a sound as present in Wyandot, and a close of the glottis (marked >) which has since been observed in Chipeway. Judging from information received from a European who had resided in Syria, this "close of the glottis" is the Arabic effect termed "spiritus lenis" and marked (?) by Lepsius.

S'vñić (in German letters Schunjitsch, an Illyrian), De Vera Orthographia, cum Necessariis Elementis Alphabeti Universalis, (Viennæ, 1853,) admits twelye vowels, which, with marks of accent and length, require seventy-two modifications of vowel characters. He supposes that these twelve correspond with the twelve semitones of the musical scale, a view which is fundamentally erroneous. Of the consonants he enumerates fifty, including the mouillé kind, and a few like *ts*, *tsh*, &c. He assigns to the German *w* the power of the English *w*, and considers German *b* in *haben* different from the ordinary *b*, his informant having probably been a provincial. He omits English and German *ng*, or confounds it with the French nasal vowels; and his notation is over-crowded with diacritical marks.

Poklukar (probably an Illyrian) published a pamphlet at Laibach in 1851, entitled, Ankündigung eines nächst zu veröf-fentlichenden allgemeinen lateinisch-slavischen, zugleich deut-schen, französischen, italienischen und eventuel auch eines Uni-versal- oder Welt- Alphabete, &c. He confounds German *ng* in *lang* (Eng. *long*) with French *n* in *loin*; and French *v* with German *w*. His notation is objectionable, although he starts with the best possible rule to secure correctness and final

* On some Points of Linguistic Ethnology; with Illustrations, chiefly from the Aboriginal Languages of North America. Proceedings of the American Academy. Cambridge and Boston. October 2, 1849. 8vo.

uniformity, by preventing each author from being influenced by the power which a letter may happen to have in the alphabet he is best acquainted with. This rule requires that *an alphabet should not contradict the Latin original*, Latin being in some sense the (*Weltsprache*) universal language. The reporter's Elements of Latin Pronunciation (Philadelphia, 1851) grew out of a perception that, without such an investigation, not a single step could be made in the right direction towards a general alphabet, the construction of which should be based rather upon scientific principles than upon the vagaries of each individual who may be called upon to write a language for the first time. Poklukar uses B, F, J, and other letters, correctly, but by a false assumption he uses C as *ts* (although he had already a *t* and an *s* in his alphabet!) and prefers *x* to the Latin Cay or Greek Kappa.

Among the latest works upon the subject* is Professor Lepsius's Allgemeine linguistische Alphabet, (Berlin, 1855,) of which there is an English version, entitled, "Standard Alphabet for reducing Unwritten Languages and foreign graphic Systems to a uniform Orthography in European Letters, &c." (London, 1855.) The profound learning of the author, and the use he has made of his alphabet in the languages of Nubia and Dar Fûr, render this a very important work. It has been approved by the Royal Academy of Berlin, which has had the necessary types cut to give the system publicity; and many of the missionary societies have adopted it, including the English "Church Missionary Society," who have commenced using it in the works of the Rev. S. W. Kölle on the languages of West Africa. Professor Lepsius expresses a hope, that, in cases where missionaries are disposed to make alterations in his notation, "the Committees of Societies will require the reasons of such deviations to be laid before them and discussed."

* Lauth's Vollständige Universal-Alphabet, (München, 1855,) and Professor Max Müller's Languages of the Seat of War in the East with an Appendix on the Missionary Alphabet,—have not yet been received.

This system professes to have a physiological basis, and the labors of the eminent physiologist, Joh. Müller, are acknowledged in this field. Mr. Ellis states that, in Müller's account of the elements, "the faults of a German ear are still conspicuous." Müller (*Elements of Physiology*, English edition, 1848, p. 1051) does not understand the nature of his own J, which he supposes a sonant German *ch*, as English *z* is a sonant *s*. With him, *m* is not a labial consonant, and he does not know the distinction between *p* and *b*. He considers *p* as having an aspirate quality, probably because an aspirate is made after it, as in pronouncing *tap'*, where a Chinese would say *tap'*. If *p* in *tap'* and *haphazard* is to be named an *aspirate* from the phase which follows it, the *p* in *pay*, *play* must be a vowel, or the consonant *l*. If the *t* in *boathook* is an aspirate because *h* follows it, it is equally an aspirate when it precedes, as in the Iroquois word *ă'htă*.

Professor Lepsius says that in *adna* or *anda* we pronounce "only half the *n* and half the *d*, whilst in *ana* and *ada* we pronounce the whole of *n* and *d*." According to this reasoning, as *n* cuts off the first half of *d* in *anda*, and the last half in *adna*, both halves of the consonant between consonants must be lost in *lend not*, *wends*, *endless*, *string*, *warps*, and in the German proper names *Heindl*, *Jöndl*, *Zarbl*, *Birkl*, *Schmözl*, *Dietzscher*, &c.

This mode of regarding a consonant position and a vowel position of the organs as in a manner constituting a unitary element, has given rise to alphabets of a more or less syllabic character, like the Cherokee, Ethiopic, Hebrew, and Sanscrit; and the system of Professor Lepsius is heterogeneous in admitting *t* and *a* for *ta*, whilst in the Hottentot dental* clack he uses but one character for the *consonant* position of the organs (a kind of *t*), and the reverberation which follows it in the cavity of the mouth, set in a *vowel* position.

* Mentioned here because it is the only one heard from a native by the reporter, who has, however, heard several others in American languages. A change of notation is required to distinguish the clacks formed by sucking in air from those in which it is expelled.

Professor Lepsius considers the vowel in *worth* as “inherent in all soft fricative consonants,” such as English *v*, in which there is indeed sonancy, but no vowel power, and least of all one requiring such open organs as that in *worth*. If anything, the supposed inherent vowel in English *v* is German ü.

A consonant like *l*, *r*, and English *z*, may have the organs so little closed as to approach the vowel quality, and in this case the small circle placed beneath the character by Dr. Lepsius is a good mark. But he uses the mark with *n* and *m* when they form syllables, although in these cases they do not differ from ordinary *m*, *n*. Thus if *z*, in the Chinese word *tssz* quoted by him, is English *z* following *s*, it does not want the mark. In English, the second vowel of *misses*, *horses*, is often omitted in hurried or careless speech, forming the dissyllables *mi-sz*, *hor-sz*, as in *su-dn* (sudden), *pri-sm* (in which *sm* have the same power as in *pri-smat-ic*), German *v'r-la-ss'n*, *v'r-der-b'n*. In rare cases a mark of syllabication will be necessary, as in *prairie*, often pronounced in English as a trisyllable, with or *without* the vowel of *utter* in the first syllable, in the latter case forming *pr-ai-rie*.

Professor Lepsius follows the English in admitting an “indistinct vowel sound” in *nation*, *velvet*, &c. This is the vowel of *wörth* and *ürn*, which stands on the throat side of the vowel scale, opposite to *awe* on the labial side. It does not yield in distinctness to any of the vowels, but as Latin U and V (English *w*) and I and J are allied, so the vowel in *urn* approximates English smooth *r*, and coalesces with it. Hence, if a person pronounces *ramrod* (*ra-mrod*), omitting -od, the listener accepts the remainder *ra-mr* as *rammer*. This so-called “indistinct vowel” is doubtful as a German sound, being more probably elided in *lieb'n*, &c., as it sometimes is in the English words *nation*, *theatr'*, &c. Its resonance may, we are told, be lost “by partially contracting the mouth, or even closing it entirely. In the latter case it is heard through the nose.” This supposed vowel is the consonant *m*. The English vowel *awe* is given as an Italian sound, although this lies between *awe*

and *owe* (Ellis, p. 20). But six labial consonants are admitted, *p*, *b*, *m*, *f*, and English *v* and *w*, no mention being made of ϕ , Ellenic β , nor English *wh*, although English examples are freely cited, and the number of English consonants stated to be twenty-two. English *wh** was probably supposed to be English *w* (Latin *v* in QVINQVE, SVAVIS, &c.) preceded by *h*, an opinion in which Professor Lepsius was likely to be seconded by the English committee which he met, and this view would probably be sustained by the missionary committees to whose decision he would have the results of original investigators referred, in case they should differ from the views laid down in the Standard Alphabet.

If such grave errors can take place with the labials, the organs of which can be *seen* and *felt*, in addition to the sounds being *heard*, we may well doubt the analysis of sounds formed out of sight, in the depths of the fauces ; and consequently, the following observations are open to correction. Recalling the admission that the reporter has never heard Arabic from a native, yet he is vernacularly familiar with the German smooth aspirate or spirant of *gay* in *re'gen*, which is the sonant of *ch* in *ich*, is free from vibration, and belongs to the *cay* contact. The Ellenic 'gamma (judged by ear from native sources) belongs to the same contact, is made with a similar close of the organs, but has the addition of a mild vibration, probably due to the vibrant action of the *edge*, and not the *body*, of the palatal veil. The French *r* *grasseyyée* is probably formed by the *body* of the palatal veil, with perhaps little or no contact of the tongue and palate, wherein it would differ from 'gamma.

Some of the Oriental languages have a contact behind that of *cay*, of which *qof* may be considered the characteristic. Aspirating *qof* produces a faecal *qh* analogous to χ , and when this is made sonant the analogy is with aspirate *gay*. Professor Lepsius considers the German aspirate *g*, Ellenic γ , and

* In a former paper, the present reporter has affirmed that no orthoepist known to him had been able to state correctly the elements which occur in the English word *when*.

Armenian *ghad* identical, and of course represents them with the same character; and the surd form of *ghad* is considered identical with *ch* in *ich*,— a greater error, apparently, than to confound *cay* and *qof*, or the Arabic “spiritus lenis” (’) of Lepsius, with ՚ain, as he marks it.

Richardson, in his Arabic Dictionary, says of *ghain*: “ This letter is articulated in the throat with a *vibration* producing a sound like that given to *r* by the Northumbrians, or the noise made in *gargling*. . . . It seems to bear the same relation to *kh* as *b* to *p*,”— i. e. the relation of sonant to surd. The *kh*, he states, “is generated by a gentle *vibration* in the throat”; consequently it is not the Greek nor German *chi*. Sir William Jones says that “the Persians and Arabs pronounce their *ghain* with a bur in the throat and a tremulous motion of the tongue, as in making the rough *r*;”— and according to S’uñic its surd analogue is an aspirate “qui a graeco χ chi in eo differt quod quasi gargarizando efferatur.”

These two vibrant sounds appear in the following Armenian words, premising that, as the character for the Armenian *ghad* resembles an angular “2,” this will be used for it, whilst ՚Q will represent the surd sound; ə the vowel in *under*, ε that in *met*; ѧ that in *arm*, but short in these examples; ր English *sh*; ւ as *k*; and the objectionable character զ as in English:—

DZNDZ2՚A՚, *a cymbal*; ՚QELC, *the mind*; ՚QAT՚, *a crucifix*;
՚Q՚QENTR՚, *a neigh*.

The division of the consonants into contacts is natural, and was appreciated by Aristotle, the Hebrew Grammarians, the Abbé Sicard, &c. A consonant character indicates a closing of the organs, as *p*, *t*, *f*, whether it precedes another effect, as in *fay*, *play*; or follows, as in *off*, or does both, as in *eft*. Each contact is subject to nearly the same phases, that is, if the closed lips make *p*, the tongue will make *t* and its base *k*. Adding sonancy to these gives *b*, *d*, *gay*; open the nasal passage, and these become *m*, *n*, *ng*. Professor Lepsius divides the phases of the contacts into *explosivæ* or *dividuæ*, as *t*, *d*,

n; *fricativæ* or *continuæ*, as *s*, *z*; and *ancipites*, as *r*, *l*. In the labial contact, *p*, *b*, *m* are placed as explosives; *f*, *v*, *w*, (English) as fricatives, without any ancipites; although English *w* is to *b* as *l* is to *d*, and English *y* to *gay*. Apparently to accommodate the German nomenclature, voiceless consonants, as *p*, *f*, are termed *fortis* instead of *surd*, whilst *b* and English *v* are termed *lenis* instead of *sonant*. The fricatives are the aspirates of other authors, whether sonant or surd, except with those who think "sonant aspirate" contradictory, and prefer "spirant" for such elements as English *v*, *z*, and *th* in *then*.

English *w* and *y* (Latin V, J) are *not* fricative in the sense of *f*, *s*, *χ*, &c., but they become so when aspirated in the words *when* and *hue* or *hew*, the initial of which is in neither case *h*, as many suppose. Writing *hue* in Latin letters and marking surd by (') it will stand "JJU or JhJU, English *u* being normally Latin JU.

Instead of twenty-two "simple consonantal sounds" assigned to English by Professor Lepsius, the following may be enumerated:—

Labial.	Dental.	Palatal.		Guttural.	Glottal.
w	l	r	soldier	y	...
wh	...	...	nature	hue	h
m	n	...	...	ng	...
b	d	...	...	g	...
... v	dh ...	z	zh	...	...
p	t	...	...	k	...
... f	th ...	s	sh	...	...

To these twenty-six might be added an *r* (as some English people use both a rough and a smooth one), and *mh* for the English and German exclamation *hm* (really "mm), a surd aspirate followed by pure *m*. This aspirate is sometimes replaced by "*n*" (found in Cherokee) and "*ng*". See Rapp, Vol. II., middle of p. 267, and Vol. I. p. 166, note.

It is here intended to assign to the English word *nature* a

surd, and to *soldier* a sonant effect, allied to *y* in *ye, you*, but made at the post-palatal point, and constituting the liquids of which *zh* and *sh* are the aspirate mutes, and into which they are apt to fall, just as *r* may fall into *s* or *z*, or *w* into *v* or *f*. Hence *nature* is often *natsh'r*, as *soldier* is *soldzh'r*. In the mouillé effect, the modified *y* is not only drawn forward to the palatal position, but when it follows a dental, this often recedes to meet it, even when the double effect has become *t-sh*, that is to say, in order to bring *t* nearer to *y*, or to *sh*, it is often drawn back from the teeth, and the point placed against the base of the lower teeth as a fulerum.*

The notation of the “Standard Alphabet” is defective, whilst tendencies towards uniformity are not fostered by its third and fourth rules, which do not regard the purpose for which a given character was invented. The four rules are:—

- I. Every simple sound ought to be represented by a simple sign.
- II. Different sounds are not to be expressed by one and the same sign.

III. Those European characters which have a different value in the principal European alphabets, are not to be admitted into a general alphabet.

IV. Explosive letters are not to be used to express fricative sounds, and *vice versa*.

The first two rules are proper, the others are exceptionable. The first is broken by its proposer in assigning a simple character for the contact and the subsequent resonance of the Hottentot clacks. The second is broken by representing the English combination *t-sh* partly by *t* and the character for *sh* (p. 55), and partly (as in Arabic and Persian) by *k* surmount-

* When the iotaism follows a labial or guttural, it can scarcely be called a mouillé effect, although it is so considered in the Slavonic languages. The *t* and *d* thus drawn back to a slight extent in the English *t-sh* and *d-zh*, would require little to place them among the palatals, when the *t* would be the lenis of *s*, and the *d* of *z*, or, if nasalized, it would form a sound between *n* and *ng*, perhaps the Sanscrit palatal *ñā*.

ed by an accentual. In Mpongwe (p. 57) this *k'* stands for English *ty*, and on p. 42 *t'* is assigned to *ty* in case it should be required. Hence, in his alphabets of Kúa and Hereró (p. 57) we do not know whether *k'* means *tsh*, *ty*, or even *ky*.

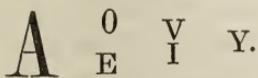
By Rule III. *c*, *ch*, *j*, *x*, are excluded, and most of the characters might have been got rid of by the same unphilosophical process. If in the course of time the measures of the French metre should become shortened, partly by the abrasion incident to use, and partly by the file of avaricious dealers, whilst other dealers, with a higher appreciation of strict accuracy, would preserve their measures at the standard value,—if, under such circumstances, the government were to enforce uniformity, those who had allowed their standard to deteriorate would be clamorous for the retention of their own, as the best known. Strict justice would require that the original metre should be restored, although none but a few just traders might have it in use.

Notwithstanding the nations of Europe have faithfully preserved the vowel characters, even to the *y* (German *ü*) of the Danes and Swedes,* there are several alphabets of English origin, which (simulating the weights and measures of certain dealers) fall so far short of the standard that every vowel character, even to that of *O*, has false powers assigned to it, the opinions and practice of those being disregarded who had for ages kept their standard pure.† No sophistry should induce a Danish missionary to pervert a letter (*Y*) belonging to, and made for, a *labial vowel*, to the power of a *guttural consonant*. Philologically, it is worse than assigning to Latin, German, Polish, &c. *J*, the power of English *w*. Let Latin ‘*V*’ have its vowel power in *ooze*, ‘*I*’ that in *believe*, and ‘*Y*’ that of the French *pinched u* (which bears equal relations to this *V*

* Besides the correct use of *Y*, the orthography of the Danish word “*havn*,” a haven, (rhyming with *town*,) is strictly Latin.

† Some English authors have gone so far as to assign to English *cay* the power of *tsh*, as if to flatter superficial readers with a greater resemblance to English. Were this view true, the English words *broken*, *kernel*, *ache*, and *kin*, would be older than the English *brocen*, *cirnel*, *ece*, and *cynn*, Irish *cine*.

and I), when we may account for the form of 'Y' by the following diagram of the affinities of the vowels:—



The rule which rejects C should not retain its cognate G, and that which assigns to the latter its original, standard power in *get*, *give*, should have retained C (or at least a character like *k* deprived of its stem) with its Latin, Gaelic, Welsh, and English power, as Mr. Ellis has done. 'C' (aided by 'Q') is the *normal character* for *cay* in the Romanic languages; and the Latin, German, &c. *ch* is a concession that, if '*ch*' represents the aspirate χ , 'C' without the aspirate mark *h* must normally represent its lenis form *cay*. 'C' is rejected by Rule III., on account of its many perversions, although still used *correctly* in several languages, whilst 'Z' with as many perversions, is improperly retained with a *corrupt* power. Its powers are as follows:—1. Ancient Greek, as English *zd*; 2. Italian *dz* (and *ts*); 3. German *ts*; 4. English in *azure*; 5. As *s* in Hungarian and Danish, and the German '*tz*'; 6. Its French power; 7. Its Spanish power.

The normal character for the sonant *s* in *rose*, *misery*, is *s*, in German, French, Italian, and English; and as the Latin mode of distinguishing sonant from surd is seen in G, C, the sonant 's' should have ended in some similar manner, as by a comma point. In writing, this would degenerate into something like the numeral sign '3,' a form which is used in Russian for English *z*, constituting a very suitable letter. Nevertheless, the adaptability of a Z rounded into a reversed S should be considered.

As English *sh* belongs to a different contact from *s*, it should not be represented by a pointed 's,' nor French *j* by a pointed 'z,' such a mode being as unphilosophical as to represent χ by a pointed *sh*, or *th* by a pointed *f*. The character *r* (but not *f* with its dot and curve below to be written with the stem of script *l* and the tail of *y*, like the German script *h*) was

proposed by Volney for *sh*, and has been used to some extent. For French *j*, the Wallachian form is probably the best, being somewhat like (j) inverted 'f,' with a curved line through the stem, sloped in the direction of the acute accentual. Some such characters are necessary, the paucity of aspirate consonant characters in the Roman alphabet being admitted.

Rule IV. is probably based upon forms like 'th' for the Greek theta,—a false notation for this sound, because theta is not an aspirate of *t*, but a member of a different contact, so that to render theta lenis (θ') it would be a kind of *t* formed between the teeth; and truly to aspirate *t* (t') would be to form a sound strictly at the *t* contact, with a quality between the aspirates θ and s . Similarly, 's' would be *s* deprived of aspiration, forming a kind of *t* posterior to the normal *t*.

The use made by Dr. Lepsius of (θ) for the surd consonant of *thigh* is unexceptionable, but as he wants a character for the sonant of *thy*,* he wavers between θ' and δ , proposing at the same time θ^c for θ ; thus establishing a complete confusion in the use of the Greek spiritus asper and lenis marks. In θ^c an aspirate mark is added to that which is already aspirate, that *surd* may be understood; and in θ' the lenis mark indicates that *vocality* has been added, not to θ^c , but to an imaginary θ . In h^c the aspiration of the Arabic *hha* is enforced, although the Ethiopic character (\aleph) was present in an inverted Greek Ψ -character, which would recall the European idea of *hh*. The (χ) with postposed (') is given for Arabic *ghain* and Ellenic *gamma*, although (χ') ought to mean *k*. In this notation (f^c) would mean *f*; (f') English *v*; † and (s') English *z*.

* That of Mr. Ellis formed on a (d) basis is probably the best,—or rather its later form in the English phonetic journals.

† There should be a rule to the effect that, *When a character is perverted from its original power, its form should show the variation.* Hence, if prejudice, or ignorance of Latin speech, should prevent a missionary from using (V) with its Latin consonant power, it should be marked to indicate its corrupt English power. Perhaps (\tilde{V}) might answer, or a break towards the left, in the left branch, like that of italic *k*. This would remove the confusion between *r* and *v* in writing.

To accommodate Sanscrit writing, Professor Lepsius uses (p̄) for *p* and *h* in *uphold*, although all that was necessary was a statement of the fact that, in the Sanscrit alphabet, the sequents *ph*, *bh*, &c. (as well as a consonant and vowel in some cases) are supplied by a single character; a statement of this kind being considered sufficient in regard to *ps* having a single character in the Greek form of *ellipsis*. But whilst the spiritus asper and lenis marks are used in these heterogeneous and unauthorized modes, the former is used as a separate character for Arabic and Hebrew 'alef. This is at least a doubtful view of the Greek spiritus lenis. As applied to a consonant, we see it in *ἄρρην*, *male* (and *ἄρσην*, because the surd aspirates *rh* and *s** are allied), and Dr. Lepsius admits an (f̄) with a Greek key-word, and he would probably write the Welsh *rh* thus. As applied to a vowel, Chavée (*Lexiologie Indo-européenne*, p. 18), with great probability, explains the Greek spiritus lenis as the *slight breath* which precedes an initial vowel; for as the vibration of the vocal ligaments is due to the passing air, a little must necessarily pass before their quiescent state can be changed.

Professor Lepsius uses the acute accentual (')† over (*k*) for *tsh*; over (*χ*) to distinguish the German *ch* in *ich* from that in *ach*; after (*l*), &c. to denote the mouillé effect; and in ('l̄) the Welsh surd aspirate *l*, for some unexplained reason. To English *sh* and *zh* are assigned *s* and *z* surmounted by the (˘) mark for short quantity,—a perversion of a well-known mark, required, with the mark of length (as in Dacota *s* and *sh*, Riggs, pp. 184, 188), to distinguish long and short continuous

* But Dr. Latham, *English Language*, 1841, considers *s* the lenis of *sh*. He omits *h*, *wh*, *ng*, *rh*, from his System of Consonants, p. 112, and he considers the mutes specifically distinct to be no more than sixteen. To these add his "Semi-vowels, *w*, *y*," and "Liquids, *m*, *n*, *l*, *r*," *n* being given as the liquid of *t*, *d*; and *l*, of *k*, *g*.

† As an accent mark, this should be thick above, and for the secondary accent thicker below. If used for other purposes, it should be of equal thickness. Used with (') for sonant and surd, the middle part should be cut away to give the appearance of two dots in sloped directions.

consonants in some languages. S is thus prolonged in hissing. "The people of Mallicollo use R in many words, two or three being frequently joined together. They express their admiration by hissing like a goose." (Cook's Second Voyage.)

A dot is used over (*n*) by Lepsius, for English and German *ng*, which is equivalent to representing *n* with a dotted *m*-character. Consistency should have required this dot to be (˘), because both indicate that the marked letter belongs to a posterior contact. Ellis's character is much better,—an *n*-character with the second limb ending like (j). As a capital (and capitals are of doubtful utility) that of Riggs is a good one, being (N) with the diagonal shaped like a sloped (J.) As a dot is the slightest of marks, it should be used (below the letters) to indicate those slight evanescent consonants and vowels which occur in some languages.

Rule IV., although it cannot be called unphilosophical, would deprive us of a well-known and exceedingly definite mode of notation with the aid of (‘ ‘), and obviate the necessity for many new characters in the course of linguistic discovery. By first assuming that *l* and *r* are "fricatives," Professor Lepsius admits (‘) with *l*, *r*, but denies it to *n*, *m*, as "explosives," *without providing a means to indicate the same phenomenon* in the latter case. Sjögren (Ossetische Sprachlehre, St. Petersburg, 1844) has a good notation for the aspirates. He uses the Russian alphabet for a basis, and instead of the ordinary *h*, he curves the end towards the left below the line, in the shape of (ɔ), then uses this appendage as the indicator of aspiration and spiration, by adding it to the stem of the Russian characters for *p*, *t*, *g*, and *k*, curving the last line of *k* backwards. For English *dz* he uses *Δ₃*, which is unnecessary, as the *z* character should appear fully, if the sound exists. Lepsius (p. 69) seems inclined to approve of this mode of writing *t_s*, &c. Such forms should be left for the concurrent emission of consonants formed simultaneously (Rapp, I. 84). Thus a child learning to speak formed *l* by applying the tongue to the upper lip, and passing the voice over the lower lip, producing a sound having the quality of *l* and 'b.'

